

2016 MA Honey Bee Colony Loss Survey

Beekeeper Information:

- 100 beekeepers responded from 12 counties; Worcester (33%), Middlesex (18%), Norfolk (11%), Hampshire (8%), Essex (6%), Bristol (6%), Hampden (4%), Plymouth (4%), Franklin (3%), Berkshire (3%), Barnstable (3%), Suffolk (1%)
- Hobbyists or backyard beekeepers (94%)
- Been keeping honey bees for less than 6 years (79%)
- Currently have or had a mentor in the past (50%)
- Attended a Bee School course (80%)
- Interested in Massachusetts Master Beekeeping Program, if available (77%)
- Heard about the survey through their Beekeeper's Association (73%)
- Have had a hive inspected by MDAR Apiary Program (52%)

Apiary Information:

- Colonies are stationary, not migratory, and local to MA year round (98%)
- Apiaries with colonies situated adjacent to vegetation (74%) (i.e. forest, field, crop field)
- Apiaries surrounded by a 6 mile radius of urban or suburban (38%), natural (i.e. forest, meadow, wetland, etc.) (37%) and agricultural (20%) areas
- Did not use their colonies for pollination of MA crops (88%)

Colony Information:

- Queens were Italian (59%), Carniolan (16%), and Russian (6%) honey bees
- Queens were 2 years or less in age (89%) and colonies were not re-queened (56%)
- Queens were purchased from Massachusetts beekeepers (38%) or produced from colonies in own apiary (33%)
- Colonies were comprised of Italian (63%), Carniolan (17%), and Russian (13%) honey bees
- Colonies were 2 years or less in age (75%) and were started from package bees (58%)

Colony Management and Treatments:

- Managed using 10 frame Langstroth hives (80%) on wax foundation (57%)
- Colonies had brood comb 3 years or less in age (81%)
- Replaced 30% or less brood frames in their colonies (80%)
- Left 10 or less filled frames of honey stores for winter in colonies (60%)
- Applied Varroa mite treatments (83%)
- Did not do a pre/post count to determine need and effectiveness of Varroa mite treatments (68%), but those that did relied on the sticky boards (37%), alcohol wash (27%), and sugar shake (22%) assessment methods
- Used mite treatments of Mite-away Quick Strips (MAQS) (20%), Oxalic Acid (OA) (17%), screened bottom boards (12%), Apiguard (7%), and Apivar (5%)
- Applied medications of Fumagilin-B (28%) and Terramycin (4%)
- Fed homemade sugar patties (28%), granulated sugar (23%), Honey Bee Healthy (11%), and Winter Patty (9%)

Colony Losses:

- Total of 430 living overwintered and added colonies from April 2016 to April 2017
- Total loss of 230 colonies from April 2016 to April 2017 (53%)
- Colony losses were reported to be attributed to Varroa mites (24%), Environmental (i.e. drought, heat, etc.) (12%), Queen Failure (10%), Viruses (9%), Starvation (8%), Colony Collapse Disorder (CCD) (4%), Natural disaster (i.e. bear attack, etc.) (4%), Pesticides (3%), Tracheal mites (1%), and Nosema (1%)

Note: All values are either listed as % of respondents and/or % of hives based beekeeper responses.